A Content Analysis of *House and Garden Magazine* Focusing on Environmental Responsibility and User Health and Safety Concerns Relative to Residential Interiors

A Senior Honors Thesis

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ABSTRACT

As the idea of Green design and sustainability become increasingly more important among interior design professionals, questions arise as to how much quality information is provided to consumers about these areas in relationship to their home. It was the purpose of this research to evaluate the amount of information provided to consumers through a typical home design magazine about environmental responsibility and user health and safety issues as they relate to interior design and residential home products. A content analysis was performed on issues from1955 to 2005 of *House and Garden Magazine*. A record was kept of how many advertisements and articles (as well as the number of pages of each) were present in each publication. It was found that only 2.8% of the total content of 51 years of *House and Garden* was relevant to the research topics. As a result, it was determined that *House and Garden Magazine* is not a good source for consumers to receive a significant amount of information on Green Design or user health and safety concerns of home goods.

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CHAPTER 1: INTRODUCTION

With the multitude of products available and the content of magazines sending consumers into creative home decorating high gear, it makes one wonder if consumers are made aware of the environmental and health risk implications that come with the large selection of products. After all, selecting materials to be used in the home can have an impact on users many years down the road. For example, the homeowners that used lead-based paint products or lead pipes in their homes 50 years ago probably had no idea that the products would be found to cause serious human health problems. Another common interior product now known to be a health risk is asbestos found in insulation and old vinyl tiles. Surely, had the builders and homeowners known of the dangers of the products they were using, they would not have used them. Where, though would consumers gain this information about the products? Over the past 50 years was it available for the consumers to access when making decisions about purchasing products for use in their homes? Naturally, the information about lead poisoning and asbestos could not have been available because the health risks were not determined until many years after the products were made available. What about the information known about products today?

It is health issues like those caused by asbestos and lead products that guided the conception of requiring those calling themselves 'interior designers' to be licensed. The National Council for Interior Design Qualification (NCIDQ) is one such organization that provides the standards and accredits qualified designers. The idea of designer accreditation was introduced in the 1960s which lead to the establishment of NCIDQ in 1972. According to this council, their sole purpose is to "protect the health, life safety

and welfare of the public by establishing standards of competence in the practice of interior design" (NCIDQ, 2006, Who We Are section, para.1). As designers are a key source to home products and design innovations, it seems only natural to insure that they take into consideration the health and safety concerns of the users. Additionally, they should be aware of the current health and safety home products to better educate their clients of such concerns.

In addition to the health/safety implications of interiors, consumers need to be informed about the environmental aspects of home products. According to Hittinger (1999) in his article on green design, the largest man-made structure is the Fresh Kill landfill on Staten Island. Due to the fact that many home products are bulky or come in large quantities, such as carpet. Disposal of these products must be taken into account. This accountability needs to insure that the disposal of used home materials does not add to the problem of ever-growing landfills. Other concerns that must be viewed are whether products are made, transported, and packaged in an environmentally responsible way. In other words, products' life cycles must be environmentally responsible from production to disposal.

Smith (2004) contends that consumers and designers are held just as responsible as the producers of home products to ensure environmentally responsible design. However, in order for a consumer to take responsibility, they must have the proper information about the products they use in their homes. Since it was found by Granzin and Olsen (2001) that many environmentally conscious consumers are readers of magazines, it would be assumed that this information should be available through that

media outlet. The research reported herein was designed to evaluate the content of a home magazine for such information.

Some major classifications of residential materials that were considered in this research are furniture, fabric, wall coverings, floor coverings, lighting and accessory items. Of course, there can be more classifications and within each there are thousands of products available to the consumer. Increase in the amount of products available to consumers started in the United States in the 1950's (Dickson, 1999). During this time, the United States was post World War II and production switched from producing for the military to producing for the public. The scope of the content analysis conducted in this research ran from 1954 in order to include the rise in consumerism, through 2005.

Objectives

The purpose of this research project was to explore one home magazine as a source of information for consumer decision-making and then analyze the content of the magazine for product information that related to environmental and health implications to the consumer. Using this information, implications were drawn concerning whether the magazine has raised social awareness to the consumer about the issue of green design. Through a content analysis of the *House and Garden Magazine* from the past 50 years this research has explored products from the post World War II era with the rise of consumerism and synthetic products, and a population boom. The following questions were investigated:

1. How much information has been provided to the consumer through *House and Garden Magazine* about home goods' impact on the environment and health of the user?

2. How has the quantity of the information changed over time?
3. For which category (environmental or health) is the information most prevalent?
4. What is the quality of the information as determined by an advertisement or article?

Limitations

The limitations of this content analysis lay in the aspect of generalizeability. As *House and Garden Magazine* was the only periodical that was reviewed. Results of this research are, therefore, not able to be used to make assumptions about the information available in other home magazines.

Another limitation was time. As time was limited, only a select sample of *House and Garden* was fully reviewed, which lead to the possibility that some pertinent information went unnoticed.

Definitions

For the purpose of clarification, the following is a list of terms and their definitions as they relate to this research:

Green/sustainable design – an interest in design that protects the global environment and the world's ecosystems for future generations (e.g. alternative energy sources, rain forest protection, resource depletion) (IDEC, 2003, F.A.Q. section, para.1).

Environmentally responsible (friendly) – meeting the needs of the present without compromising the ability of future generations to meet their own needs (IDEC, 2003, What is it section, para.1).

Energy efficient – a nomenclature given to products or systems that use less energy and have the same or better performance than conventional products or systems. Energy

efficient products/systems are meant to save nonrenewable resources and/or use renewable resources; to save money on utility bills; and to protect the environment by producing little or no waste (Tahoe Solar, 2006, Definitions, para.4).

User health/safety – the condition of being protected against failure, damage, error, accidents, or harm. Protection involves here both causing and exposure (Wikipedia, 2006, Safety, para.1).

CHAPTER 2: REVIEW OF LITERATURE

The following chapter reviews the subjects of: consumer decision making, environmental responsibility, user health and safety, relevant issues in history, and social responsibility.

Consumer Decision Making

It seems that an effective way to get the message of Green design to consumers would be through magazines. Evidence suggests "the magazines that people read provide a more accurate indication of their behavior as consumers than their demographics" (Schiffman and Kanuk, 2000, p.239). For instance, Schiffman and Kanuk (2000) found that the readers of *Good Housekeeping* were female, had an average annual income of $33,000 and watched *Oprah*. With consumer information that specific, marketers of Green design could print extremely effective ads in their target audience's magazine. After all, promotion is one of the inputs called "External Influences" that has a bearing on consumer's buying behavior (Schiffman and Kanuk, 2000).

Magazine influence was also discussed in a study by Granzin and Olsen (2001) on the demographics of individuals who were likely to participate in environmentally sensitive activities. The activities studied were newspaper recycling, clothes and furniture donation for reuse, and walking to conserve energy. The researchers found evidence that supported their hypothesis that greater participation would come from females that possessed a higher education and devoted more attention to media, including magazines. They also found that individuals with more sources of friends, family, newspapers, magazines and television, would be more likely to partake in environmental protection activities. Additionally, their results showed that those individuals most likely

to actively participate in environmentally friendly activities were homeowners (Granzin and Olsen). This would suggest that some of the magazines that these participants read are those like *House and Garden*, which pertain to homeownership.

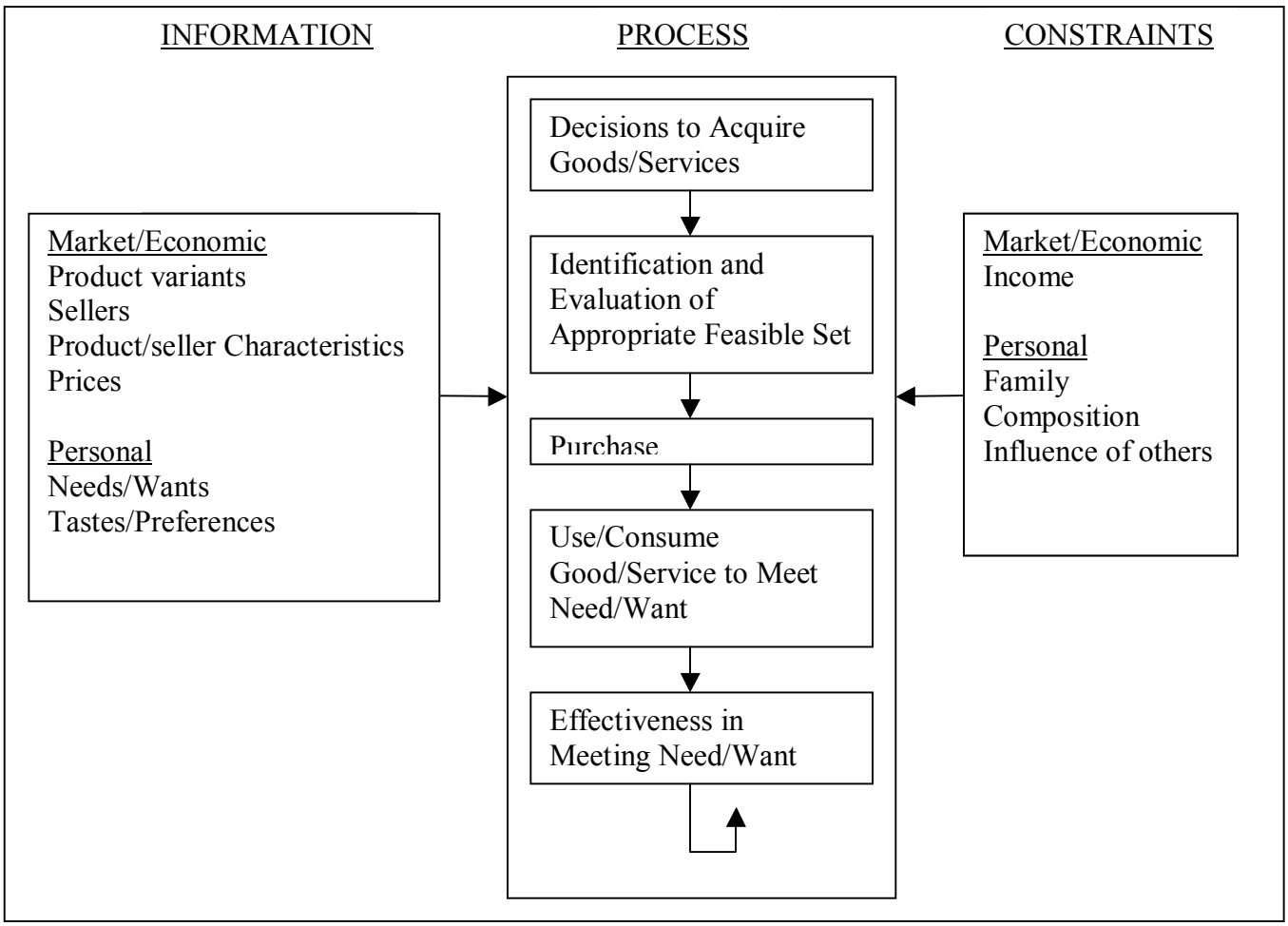
Ewing and Sarigollu (2000) focused on consumer preferences in regards to clean-fuel vehicles. They found that legislation would not be enough to create a change in consumers' buying habits of products that preserve the environment. Instead, consumers need to see the benefits of changing their purchasing behavior in such a way that would benefit the environment (and the best way to do this would be through advertisements with distinct attitudes). The research suggests that there are different attitude groups toward environmental protection practices and that each group requires different types of advertisement. This would ensure that each group would see a benefit of environmental protection that directly related to them. An example from the research is that individuals unconcerned with environmental preservation would be swayed if there were some financial benefit to using an environmentally friendly product. Based on their findings, the researchers suggested a rebate or cash-back offer on environmentally friendly vehicles could persuade consumers to use an eco-friendly car. Similar thinking toward advertisements in home magazines should be well received.

Theoretical Model

An examination of a theoretical model of consumer decision making provides a framework by which an understanding can be made of how consumers make decisions based on input from media sources. Gabriel and Lang (1995) proposed that having a choice without sufficient and reliable information is not a choice; rather, it is a uniformed decision that would have a better outcome given all of the information. As we see in the

Consumer Decision Making Model (Figure 1) proposed by Geistfeld (n.d., p. 2), information is a key element which heavily influences the process of making decisions. In the decision making process we see that the consumer considers alternatives, but cannot make a decent comparison if the information is inadequate. Based on these concepts, consumers will not have a choice between "standard" products and environmentally friendly or health conscious products if there is not any information on the latter two. The consumer is left to choose from the only products of which they are aware and for which they have reliable information.

FIGURE 1: Consumer Decision Making Model



Environmental Responsibility

According to the Merriam-Webster dictionary (2006), green is not just a color in today's vernacular. The meaning of Green is also "tending to preserve environmental quality (as by being recyclable, biodegradable, or nonpolluting)" (Green, 2006, p.1). The content analysis conducted in this research examined articles and advertisements that focus on Green design issues and products. This includes energy efficiency issues, as they are directly related to preserving environmental quality.

Macy and Thompson (2003) found that 41% of individuals who consider themselves recyclers throw recyclable items away. This could indicate that home recycling systems are not always convenient to consumers. Also among the recycling group, 13.42% felt that recycling is more effort than it is worth. With better interior designs that incorporate home recycling stations, improved home recycling products and enhanced consumer awareness, more convenient ways of home recycling would greatly benefit the Green design initiative. Better recycling stations, however, are not the only problems that can be addressed with Green design. Using products for the home that are made from recycled products, like polyester carpet made from recycled pop bottles, allows consumers to buy environment friendly substitutes without a compromise in quality. The results of an analysis by Watson and Warnock (2003) of recycled and newly manufactured carpets showed that "recycled nylon and polyester carpets are just as good, if not better in some cases, as the newly manufactured carpets" (p437-8). It was found that the durability of the recycled carpet, in tests of resistance to fading, maintaining manufactured counts of tufts per square inch, and greater percent compression and

recovery of the yarn from use or soiling, exceeded the marks of conventional carpet. The findings of this research demonstrate to consumers that environmentally responsible products are of equal or better quality than those of "traditional" home goods. The possible disconnect, however, is the bridge between innovative Green products, such as recycled nylon or polyester carpets, and consumer awareness of such products.

A further example of innovative Green products was found in an Oregon State University study, where Chang, Chen, and Francis (1999) identified eight product areas as having recycled product potential. These included carpet cushion, fiberfill stuffing, home insulation, cleanup products, mattress pads, futons, geotextiles, landscaping, and concrete reinforcement. According to the study, the researchers chose these eight consumer subjects based on three principles; that the performance characteristics of the products will not be sacrificed, the price will be competitive, and reprocessing (cleaning, dyeing, finishing) is not needed with the exception of shredding for fiberfill. Growth for recycled goods in these areas is positive and is expected to continue this trend, even though a majority of products currently are made from virgin sources.

In addition to recycling and home goods made from recycled products, information regarding renewable or replenishable products was also sought during the analysis. This is directly related to the idea of sustainable design which, like the idea of Green design, "implies an interest in design that protects the global environment and the world's ecosystems for future generations" (IDEC, 2003, F.A.Q. section, para.1). Renewable products are those made from a resource that is "replenished through a relatively fast-acting natural process" (IDEC, 2003, Terminology section, 'renewable'). An example of a renewable resource is bamboo or cork which can be used as a flooring

material, among other things. Replenishable refers to the idea of using energy that is harvested from the sun, wind, or water or using "materials from renewable sources (e.g., sustainably managed forests) or virtually inexhaustible ones (e.g. mud, clay, sand)" (IDEC, 2003, Terminology section, 'replenishable').

As stated previously, energy conservation was also important information to this content analysis, as it falls into the realm of the "global environment" and "world ecosystem." Some facts and figures of energy consumption and their relationship to housing puts this importance into perspective. In the United States there are over 75 million residential structures and almost 5 million commercial buildings (IDEC, 2003). As a whole, these buildings consume one-third of the total US energy consumption and two-thirds of all electricity. Due to this large consumption of energy, the goal of Green design is to build homes and buildings so that they "use a minimum of nonrenewable energy, produce a minimum of pollution, and cost a minimum of energy dollars, while increasing the comfort, health, and safety of the people who live and work in them" (IDEC, 2003, Why Should I section, para.1). The concept of a sustainable building goes hand in hand with the idea of a Green product lifecycle. When considering a product's environmentally responsible lifecycle, all aspects of production, shipment, packaging, use and disposal must be evaluated, as they all have an impact on the environment. Ultimately, it does no good to ship a renewable resource like bamboo floors in a cardboard box made of deforested trees, for example.

User Health and Safety

It is equally important to realize that home products can not only harm the ecosystem, but can also pose a health and/or safety threat to the user. The issue of user

health and safety was therefore a concern of this content analysis and any information found that alerted a consumer to a health or safety issue in the home was recorded.

This concept of user health and safety spawns from well known indoor products that pose human health risks such as lead paint and asbestos. By attempting to find information in past publications of these known risks, a prediction can be made as to the amount of "lag time" there is from discovery of the issue to the alert of the consumer and then to alternative safer home products. This knowledge could then lead to a shorter "lag time" in today's publications and greatly benefit public health issues.

According to Krieger and Higgins (2002), health problems associated with poor housing include asthma, respiratory infections, spread of disease and lead poisoning, among others. It is shown that in the United States each year, 13.1 million injuries occur in and around homes, one million children in the United States have levels of blood lead content high enough to negatively affect their mental abilities, and 2,900 people die in house fires. The researchers felt that health concerns as they relate to housing are at such high risk levels, that there is a need for the implementation of housing policies to help combat the growing epidemic. With such great concern over the issue and a large population experiencing negative impacts on their health and well-being as a result of their home, an interiors magazine might recognize the need for increased public awareness. A home magazine might publish information on issues that pertain specifically to home products such as carpet, which is found to house dust allergens and toxic chemicals (Krieger and Higgins, 2002).

A recent discovery of such a health issue is that of volatile organic chemicals (VOCs). These chemical gases are emitted from certain solids and liquids, a number of

which are contained in home goods. Some such products include, but are not limited to: "paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings" (EPA, 2006, Indoor Air Quality section, para.1). VOCs were found to be at a much higher concentration indoors than out (up to ten times higher) and according to the EPA can have short- and long-term adverse health effects. Discoveries such as this, and product alternatives is the type of information that was sought in order to determine if it is available to the consumer through *House and Garden Magazine*.

Overview of Relevant History

As the content analysis was carried out, it was important to keep some historical points of interest in regards to environmentalism and health factors in building materials at the forefront of the mind. For example, in 1901 a solar-powered irrigation pump was invented (Gordon and Gordon, 1999). By 1948, solar technology had advanced to the point of the first solar powered heating system being installed in a house in Dover, Massachusetts (Dickson, 1999). Information on this advancement in sustainable energy, especially as it relates to home use, could be available in a home magazine. As far as user's health and safety is concerned, the peak use of asbestos based products was witnessed in 1954, when a large celebration was held in Asbestos, Quebec for Johns-Manville Company's opening the largest asbestos mill in the world. By 1985 the adverse health risks of asbestos were realized and the Manville Corporation was bankrupt and offered a $2.5 billion settlement to 16,500 different lawsuits for "asbestos-related health complaints" (Dickson, 1999). This rise and fall of such a largely used interior product, the end of which resulted in a multi-billion dollar lawsuit, could possibly be documented in the pages of an interiors magazine.

Nationwide environmental concerns were being addressed in the United States in 1970. This is when the first Earth Day was held and when the creation of the government agency, the Environmental Protection Agency (EPA), was developed to deal with growing environmental concerns (Dickson, 1990). From this time forward, a shift in public interest and concern for environmentally responsible topics could most likely be mirrored within the pages of a home magazine. Again in 1990, a resurgence of environmentally responsible public thinking manifested itself in Earth Day II, the 20th anniversary, which caused what was considered the largest demonstration in history (Dickson, 1999). Again, public interest could probably be manifested within the pages of popular magazines. Coupled with environmental concerns in general, the United States went through a national energy crises starting in the mid-1970s. Shortly after the original Earth Day, in 1974 year-round daylight savings time started in an effort to "minimize the effects of the energy crisis" (Dickson, 1999). During this period, public interest showed a demand for alternate energy sources, as the one that was being almost solely relied on was failing.

Social Responsibility

An article on green design states that the largest man-made structure in the world is the Fresh Kill landfill on Staten Island in New York (Hittinger, 1999). In his article, Hittinger asks, "what can interior designers and architects really do to help the environment?" (p.1). When keeping to a timeline and spending within a budget, designers and architects have a difficult time convincing their clients that Green design is just as cost-effective and convenient and durable as 'traditional' design. Furthermore, the first step to the process of green design is to "effectively communicate the message to the

client that sustainable design is realistic" (p.1). Home magazines could be the effective communication that Hittinger is searching for.

An article that would agree with Hittinger also suggests that consumers and designers are being held just as responsible as producers in the creation of Green products. The article, "Responsibility and Accountability," asks the question "who is responsible for making sure that the products we use are made from sustainable resources, can be recycled and/or repurposed, are not encased in wasteful packaging, consume large amounts of energy being transported, or were produced in sub-standard or hazardous 'sweatshop' conditions?" (Smith, 2004). It goes on to imply that consumers, and therefore the designers who assist them, need to consider the long-term effects of chemicals and materials used in construction. Producers will create goods for which there is a demand and to appeal to those to whom they sell. Consumer requests for environmentally friendly materials will cause producers to change their mindset and expand their Green product base.

Summary

Through evaluation of consumer decision making, it is observed that magazines have a relevant impact on consumers' product purchasing decisions. By evaluating this outlet of consumer information, significant data analyzing past trends as they relate to environmentally responsible design and user health and safety can be collected. This information can then give insight into the direction of current publications and their need to promote the importance of Green Design.

CHAPTER 3: METHOD

This section will discuss the processes taken to complete this study as they pertain to content analysis, description of the analyzed magazine, procedure, and data analysis.

Content Analysis

According to Neuendorf (2002), a content analysis is an effective research tool when the amount and type of information is being sought. This study used a content analysis method, because the research seeks to find what and how much information is available to consumers regarding Green Design and health/safety issues in a typical design magazine. The most sensible way to find the answers to these questions is to simply study the issues of the magazine and record the findings. Upon completion of collection of the content, the findings can be analyzed and the results can be used to answer the research questions.

Description of Selected Magazine

The content analysis of this study was performed on *House and Garden Magazine*. This particular magazine was chosen for many reasons, one being because it had a publishing history that dated back to 1900, which clearly fit into the selected date range of 1955 through 2005. Furthermore, issues dating back through this range were made available through The Ohio State University Library. The selected date range was chosen because these dates include a period in the history of the United States that was post World War II where the population was on the rise and so was consumerism. Synthetic materials, once produced for the benefits of the military, were now being used for public applications, such as nylon in stockings and carpet. In 1970 the Environmental Protection Agency (EPA) was established by the United States government, which would

indicate that there was a strong push by the public to regulate and recognize the importance of natural resources and the benefits of clean water, air and land. All of these factors made this period of time significant to the study.

One additional reason *House and Garden Magazine* was chosen is that it is considered to be a magazine for "the well-lived life" (Shelter Magazine Digest, 2006, para.3). This motto would indicate that they hold their reader's well-being in high regard, and would display that sentiment in content that emphasized this well-being in the home. *House and Garden Magazine* also emphasizes the aesthetic of the home, claiming that their magazine "helps you see like a designer, visualize like an architect, think like a landscaper and shop like a decorator," (House and Garden, 2006, Subscription section, para.1). This further emphasis on aesthetics and shopping could indicate that the seamless integration of design and function is important, as well as where new, innovative products can be purchased. Supplementary statistics for *House and Garden Magazine* include a circulation to 890,244 readers whose median age is 48.6 years old (Shelter Magazine Digest, 2006). Their readership is 70% female and has an average household income of $110,385.

Procedure

For each year from 1955 to 2004 the Table of Contents in each of the 12 issues was reviewed for articles pertaining to environmentally responsible design and/or consumer health as it relates to the use of home products. If an issue had any article that met the criteria, every page of that entire magazine was reviewed for other content that also pertained to green design and consumer health. If there happened to be more than one magazine per year that had qualifying information, then one magazine was chosen at

random to analyze. Likewise, if no issue of a particular year had any information in its table of contents that qualified it for review, then one of the 12 issues was randomly chosen and analyzed.

Every page was reviewed during the individual analysis of each selected magazine. All advertisements were read, however, due to time constraints, the articles were not. Titles of articles, as well as summaries and sections emphasized as important by differences in type font were all read and taken into consideration. The content that was important to this research were keywords relevant to eco-friendly design (i.e. sustainable, recyclable, Green Design, environmentally friendly, energy efficient, etc.) and user health factors (i.e. poisonous, indoor-air quality, VOCs, off-gas, etc.). These keywords separated the information into two categories: environmental or health. It must be noted, however, that the above words were merely examples and not absolute in the relevance of found material. Ultimately, the researcher made the final decision based on research and attained knowledge on the subject matter to determine the relevance of information.

Whether the information was found in an advertisement or article determined the quality of the information, presuming articles are of higher informational quality. The number of advertisements and articles determined the quantity of information. All of these data were recorded and coded on a record sheet that was developed by the researcher (see Appendix A for record and code sheets). The number of pages that each advertisement and article consisted of was counted as whole pages, half or quarter pages based on judgments of how much space on each page was being allotted to said advertisement or article.

Data Analysis

The coded data was entered into Microsoft Excel in order to gather sums and averages of number of pages, advertisements and articles per issue and in total for the study. Pertinent graphs were also generated in this same program. The findings were then used to address the four original research questions.

CHAPTER 4: RESULTS

The following section presents results of the content analysis as they pertain to the original research questions.

Q1: How much information has been provided to the consumer through *House and Garden Magazine* about home goods' impact on the environment and the health/safety of the user?

Table 1 displays the total number of advertisements and articles found throughout the 51 year period as well as the number of pages of the magazine that were used by the advertisements and articles. As the table shows, there were 85 advertisements that mentioned an environmental message and 46 advertisements that pertained to the health/safety of the user. In all, there were 131 advertisements which accounted for 130.75 pages in 49 issues. This averages just over 2.6 advertisements and pages of advertisements per issue. In other words, the advertisements tended to be full page ads. There were a total of 33 relevant articles within the 49 issues, 27 of which were environmental and 6 health/safety related. These accounted for 114.5 pages (84.5 environmental, 30 health/safety) in 49 magazines. These figures average 0.67 articles per issue, accounting for 2.33 pages per issue. Statistically, this means there would be an average of one relevant article every other year that consisted of less than 3 pages. In reality, though, relevant articles tended to be clumped in the same issue or a small series of years together, not spread out every other year. Table 2 displays the raw data reported by each issue.

TABLE 1: Totals and Averages of Quantity and Number of Pages of Articles and Advertisements per Relative Category of Environmental or Health/Safety

	Ad Env. (#)	**Ad Health** (#)	**Ad # of pgs Env.** (#)	**Ad # pgs Health** (#)	**Article Env.** (#)	**Article Health** (#)	**Article # pgs Env.** (#)	**Article # pgs Health** (#)
Total (51 years)	85	46	86.5	44.25	27	6	84.5	30
Averages per issue	1.73	0.94	1.02	0.96	0.55	0.12	3.13	5

TABLE 2: Data per Year and Issue of Advertisements and Articles

0	1	2	3	4	5	6	7	8	9
Issue ID (mmyy)	**Article in T.O.C.** (y/n)	**Ad Env.** (#)	**Ad Health** (#)	**Ad # of pgs Env.** (#)	**Ad # pgs Health** (#)	**Article Env.** (#)	**Acticle Health** (#)	**Article # pgs Env.** (#)	**Article # pgs Health** (#)
1055	y	1	1	1	1	1	0	1	0
0356	n	1	4	1	4	0	0	0	0
0957	n	2	2	2	2	0	0	0	0
0558	n	1	1	1	2	0	0	0	0
0259	y	2	2	1.5	2	1	1	2	1
0960	n	3	0	3	0	0	0	0	0
1061	n	0	6	0	7	0	0	0	0
0862	n	0	4	0	4	0	0	0	0
0663	n	1	4	1	3.25	0	0	0	0
0264	n	1	3	1.25	2.25	0	0	0	0
1065	n	0	5	0	4.25	0	0	0	0
0266	n	0	1	0	0.5	0	0	0	0
0367	n	1	0	1	0	0	0	0	0
1068	n	0	0	0	0	0	0	0	0
0169	n	0	1	0	0.5	0	0	0	0
0570	n	0	0	0	0	0	0	0	0
0571	y	1	2	1	2	1	1	2	2
0672	y	1	0	0.5	0	3	0	5.5	0
0873	n	0	2	0	2	0	0	0	0
0574	n	1	0	1	0	0	0	0	0
0875	y	0	2	0	2	2	2	3.25	23
0376	y	2	1	1.5	1	1	0	1.5	0
0477	n	9	0	8.5	0	0	0	0	0
0278	y	4	0	4.25	0	1	0	6	0
0779	n	3	0	3	0	0	0	0	0
0780	y	11	0	4.5	0	1	0	1.5	0
0181	y	7	0	15.5	0	3	0	8.25	0
0982	n	6	0	5.25	0	0	0	0	0
0283	n	3	0	0.75	0	0	0	0	0
0384	y	6	0	4.75	0	1	0	6.25	0
1085	n	0	0	0	0	0	0	0	0
0686	n	1	1	1	0.5	0	0	0	0
0887	n	0	0	0	0	0	0	0	0
0588	y	1	0	1	0	0	1	0	2.5
0489	n	1	0	0.25	0	0	0	0	0
1190	y	2	0	2	0	1	0	2	0
0791	n	0	0	0	0	0	0	0	0
0592	y	2	0	2	0	1	0	2	0
0293	y	1	0	1	0	2	0	6.75	0
94	n/a	0	0	0	0	0	0	0	0
95	n/a	0	0	0	0	0	0	0	0
1196	n	0	0	0	0	0	0	0	0
0897	n	1	0	1	0	0	0	0	0
1098	n	1	0	1	0	0	0	0	0
0999	n	1	2	2	2	0	0	0	0
0800	n	0	0	0	0	0	0	0	0
1101	n	2	0	3	0	0	0	0	0
0102	y	5	1	9	1	3	0	24	0
0303	n	0	0	0	0	1	1	1	1.5
0804	y	0	0	0	0	2	0	8	0
1005	n	0	1	0	1	2	0	3.5	0

Q2: How has the quantity of the information changed over time?

The quantity of advertisements that relate to the user's health and safety is greater in the early years of the study and peaks in year 1961 (see Figure 2). The number of pages allotted for these ads follow the same trend, unsurprisingly. The quantities of advertisements that have subject matter related to the environment, however, do not start to rise until the late 1970s and early 1980's (see Figure 3). These advertisements level-off in the late 80s and early 90's only to begin to rise in the late 90s and the 2000s. Again, the quantity of pages with these ads follows the same trend. Unlike the advertisements, the quantity of articles pertaining to the user's health and safety are scarce throughout the entire period of this study (see Figure 4). Articles with an environmental message are not present in the magazine until the early 1970s and become more prevalent when the advertisements did, during the late 70s and early 80s (see Figure 5). The number of pages for environmental articles spikes during 2004.

FIGURE 2: Quantity of Health Advertisements and Number of Pages

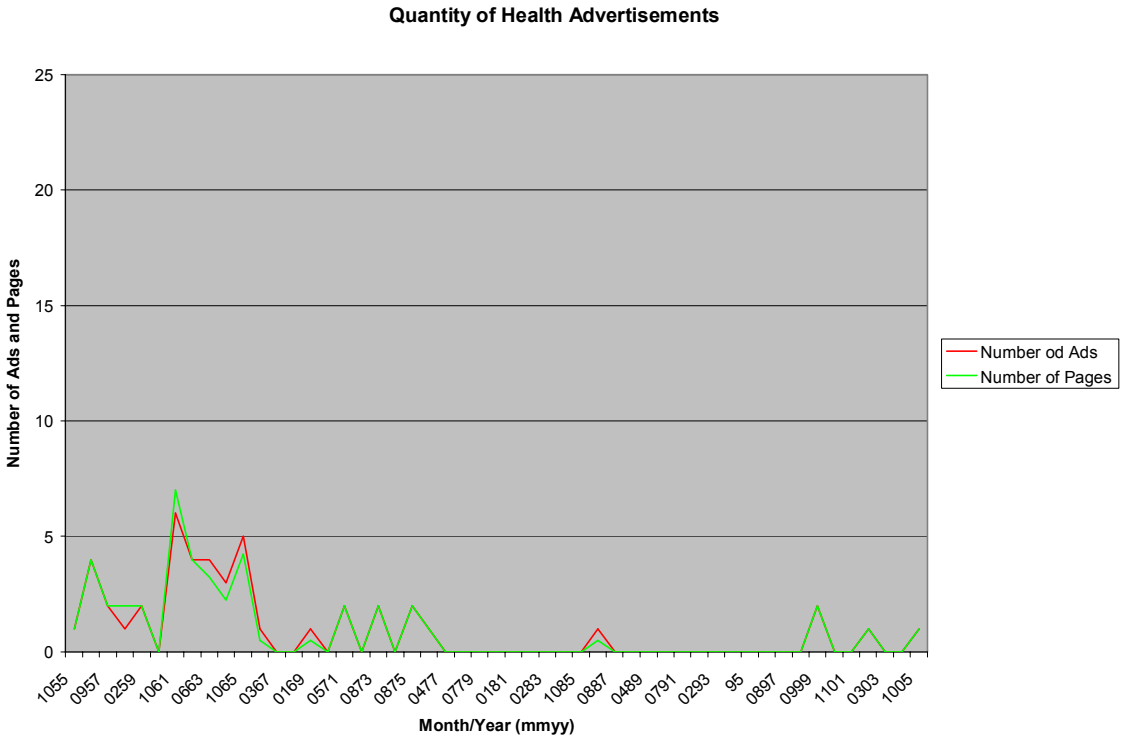


FIGURE 3: Quantity of Environmental Advertisements and Number of Pages

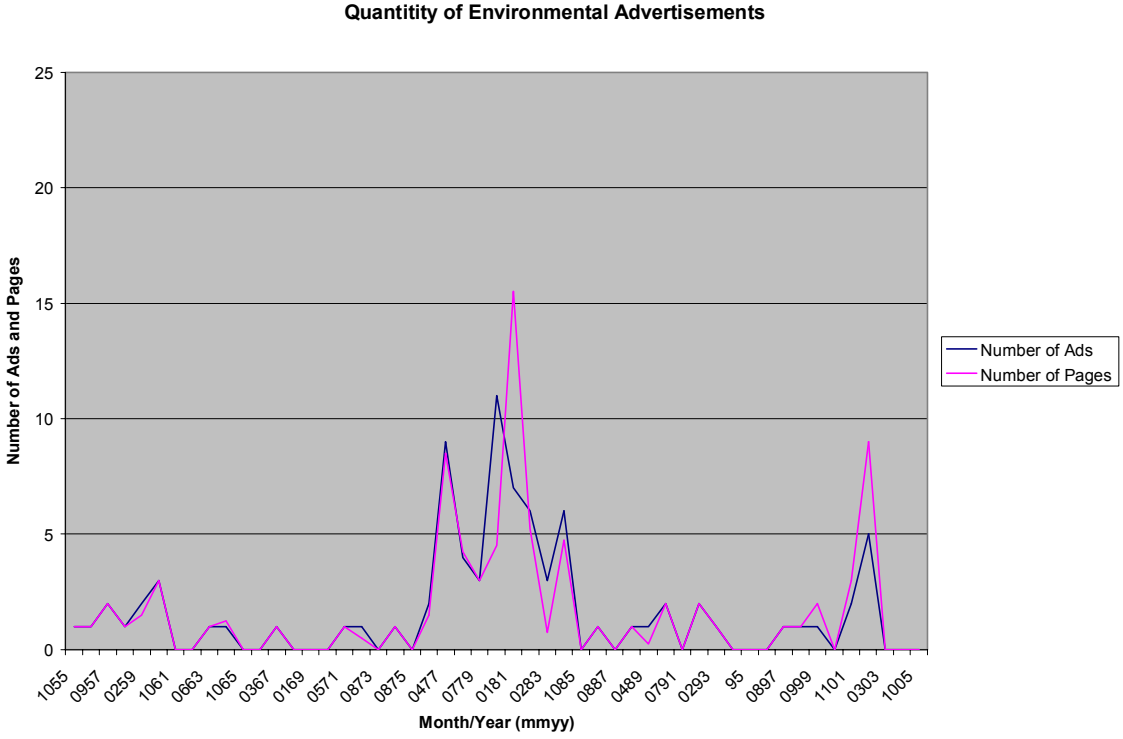


FIGURE 4: Quantity of Health Articles

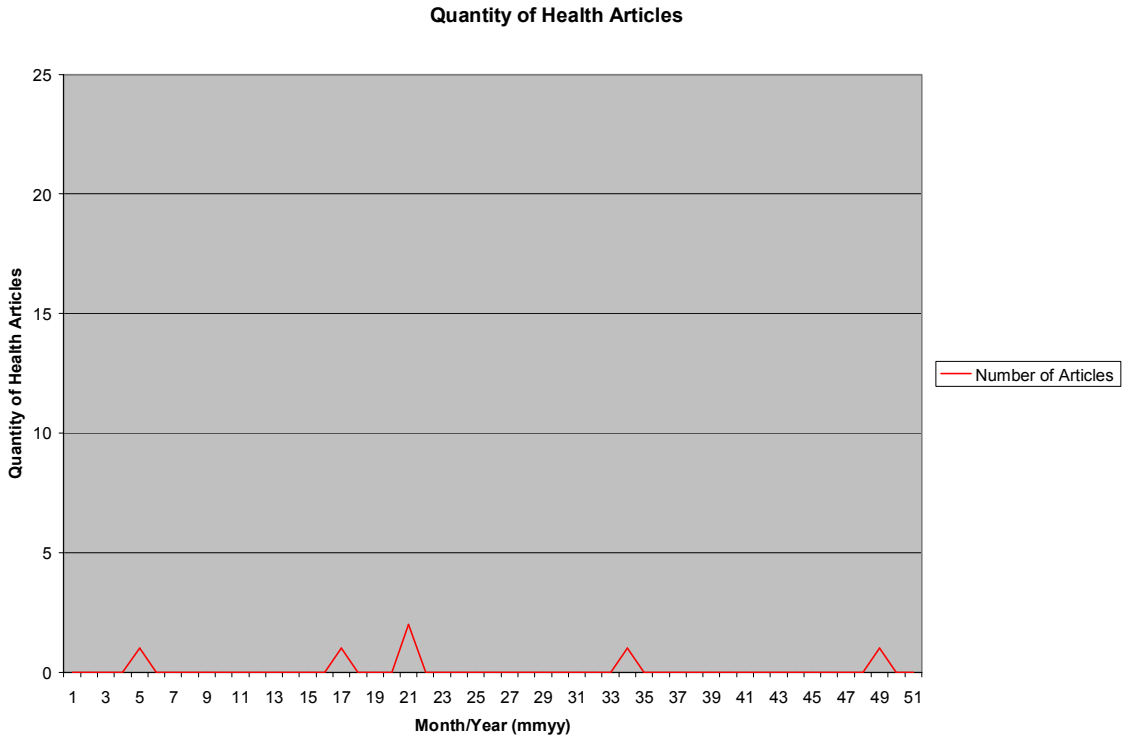
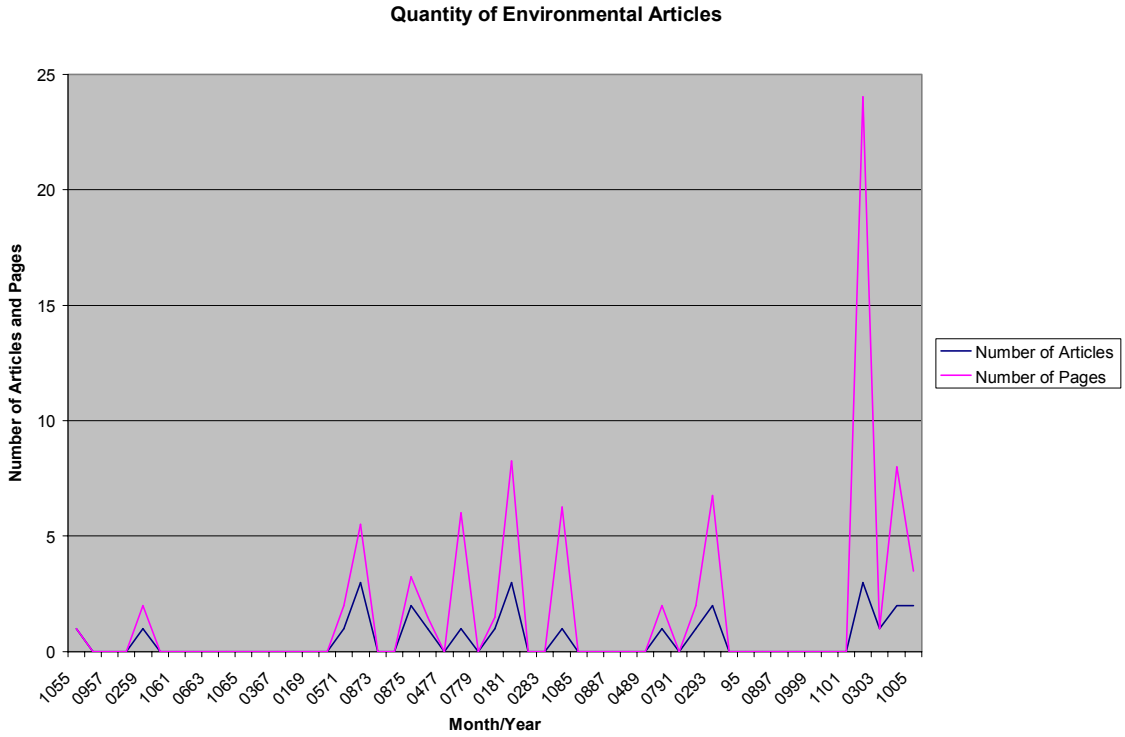


FIGURE 5: Quantity of Environmental Articles and Number of Pages



Q3: For which category (environmental or health/safety) is the information most prevalent?

In the earlier years of the study, advertisements relating to health and safety were the most prevalent. Very few articles pertaining to either category, environmental or health, were found in these years. As the study progressed to the mid 1970s, however, the information found in both articles and advertisements strongly favored environmental issues, which continued to be more prevalent than health and safety through the end years of the study (see Figures 2-5). In total, there were 109 ads and articles (166.5 pages) that were in the environmental category. This is compared to 51 ads and articles (73.25 pages) that fell into the health and safety category.

Q4: What is the quality of the information, as determined by advertisement or article?

As stated in the methodology, it was set forth that articles would be assumed to be of higher quality information, than that of information made available in advertisements. Overall, there were more advertisements than articles in both categories. The number of pages for articles, though less than total number of pages for advertisements, is comparable. There were 86.5 pages of environmental advertisements followed closely by 84.5 pages of environmental articles (see Table 1). The same was true for the health/safety category, with 44.25 pages of advertisements and 30 pages for articles. Based on these numbers, the quality of information is too close to make a distinct determination.

CHAPTER 5: DISCUSSION

The following section will discuss the findings as they relate to the original research questions. The researcher will also take this time to note an addendum to the original methods for this content analysis.

Addendum to Method: It was overlooked by the researcher to record the total number of page numbers in the selected issue during the data collection. These data would allow a relative comparison of what percentage of an issue was devoted to environmental or health issues pertinent to this study. As time would not allow a gathering of all the number of pages of every issue within the date range after the fact, an estimated representation of the 51 year period was taken. This was done by recording the number of pages in each issue of the first and last years of the study (1955 and 2005) and each issue of a randomly selected year within each decade in between (i.e. 1 year from the 1960s, 1 year from the 1970s, etc.). The number of pages for each year was then averaged to derive the approximate number of pages per issue of that specific year. With these data, the fluctuation of number of pages of the magazine could be traced throughout the time period of the analysis. This ultimately allowed for a proportional comparison of relevant information and size of the magazine. The average number of pages per issue in each selected year is as follows:

1955: **175** pages per issue
1961: **171** pages per issue
1976: **202** pages per issue
1983: **201** pages per issue
1998: **167** pages per issue
2005: **160** pages per issue

The average number of pages per issue for time period of study is **179** pages per issue

With an understanding of the addendum to the method, the discussion can move forward.

Q1: How much information has been provided to the consumer through *House and Garden Magazine* about home goods' impact on the environment and the health/safety of the user?

When examining the total number of pages in the entire analysis and the average number of pages per issue, both shown in Table 1, a comparison can be made to the rough average value for total number of pages per issue that was calculated above. The average number of pages devoted to environmental advertisements and articles per issue is 4.15 pages (1.02 + 3.13). By dividing this value by the average number of pages per issue, (179 pages) it is seen that only 2.32% of an average issue has content related to environmental responsibility. Likewise, the average total number of pages for health/safety related material per issue was 5.94 pages (0.94 + 5). This yields a percent of 3.33% of an average magazine contained information that was relevant to health/safety of the user. However, as noted in the results section, the reality is that most relevant information was clustered in one or two consecutive years with large gaps of issues with little to no relevant information.

Perhaps a better way of analyzing the data is to take the average number of pages per issue (179) and multiply it by 49, to derive the approximate total number of pages in the study. This gives a total of 8,771 total pages analyzed, 245.25 of which contained pertinent information to the study. This means, that in the 51 year period and 49 magazines, approximately 2.80% of the magazine's content was related to environmental responsibility or health/safety of the user.

It seems that 2.8% of relevant information over a 51 year period is very low and inadequate to provide a consumer with enough substantial information to make an informed decision on appropriate home goods products. The amount of information is even more inadequate as some of the findings were not directly related to interior home products. Rather some information was counted simply because it was in a home magazine and the message of the information was generally relatable to the relevant content being sought by the researcher. Some examples include: fuel/energy efficiency of automobiles, tree preservation and environmentally friendly gardening (see Appendix B for topics per issue year). Even more disturbing is that of the health and safety information found, nothing dealt with the big issues of asbestos and lead in interior products.

The data did show some positive moves in the right direction, however. A large portion of directly related information to environmental responsible design was found in the 1990s and especially the 2000s. Coupled with the decreasing average amount of page numbers witnessed in the later years of this publication, a larger percentage of the magazine is devoted to this growing area of concern within the interiors world. In March of 2006, the American Society of Interior Designers (ASID) held its annual conference on design. In the brochure for the conference, *Interiors 06: the ASID Conference on Design*, the information to be presented at the conference was divided into six distinctive categories, one of which was "Sustainable Design" (p.20). This means that of the most cutting edge information being presented to designers, $1/6^{th}$ or 16.67% is relevant to Green design. If the current trend in house and garden magazine continues, at least 17% of its information base will hopefully be dedicated to educating consumers of the

importance of sustainable design issues. This would then bring the magazine up to par with industry professionals.

Q2: How has the quantity of the information changed over time?

One of the most important areas of this study is to analyze the changes of the quantity of information as it relates to time. After all, it would defeat the purpose of this study if no attempt was made to understand the past in order to make changes for the future.

First, the amount of information relating to health/safety will be discussed. As seen in the raw data of Table 2 and in the Quantity of Health Articles chart, it is observed that the amount of information has not really changed over the 51 year period, in that there were almost no articles to speak of (See Figure 4). This, as mentioned above, is of great concern in that consumers are not getting quality information from this magazine as it pertains to their health and safety in their home. Basically, *House and Garden Magazine* is not a reliable source for consumers to receive information on past and developing health and safety concerns in the home and with home products. Again, the major concerns of asbestos and lead were not accounted for in past years, which leaves little expectation that any information will be published on today's growing concerns of indoor air quality and VOCs.

In contrast to health articles, there were more health /safety advertisements which were more prevalent in the early years of the study. Most of these, however, did not provide quality consumer information; rather they were marketing campaigns aimed to appeal to the concern of the well-being of the family. Some examples include the sterilization properties of a dishwasher to kill germs that could infect family members, or

carpet that cuts down on drafts typical with bare floors. As a result of cutting down on drafts, ankles would stay warm and children would not catch colds. As the study progressed into later years, the number of these advertisements appealing to family well-being tapered off.

Unlike the relationship between health advertisements and articles, environmental advertisements and articles corresponded well with each other. The amount of each increased in the mid to late 1970s and into the early 1980s, went into recession and then began appearing again in the late 1990s and 2000s. This trend was not surprising in that it corresponded with the environmental movement in the early seventies and the energy crises of the late 1970s and early 1980s. As the economy was booming in the 1990s concerns about natural resources and environmental responsibility lessoned until about the 20th anniversary of Earth Day when it seemed the public was taking notice of wasteful habits. This was amplified in the 2000s with the market slump after September 11, 2001, and the growing emphasis within the design community on sustainability, as witnessed in the program schedule of the ASID Design Conference of 2006.

Although it is encouraging to see the publication take notice of environmental issues, it always seems after the fact. For instance, as noted in the literature review, solar technology was beginning to develop as a sustainable source of energy back in the early to mid-1900s with the invention of a solar powered irrigation pump, and a solar powered home heating system. Articles and advertisements for such alternate energy sources were not published in *House and Garden* until the energy crises in the 1970s and the public was looking for a way out of their dependency on traditional fuels and energy sources, which are not sustainable. Hopefully, this and similar research can spotlight repetitive

mistakes and change how consumers are receiving necessary information, whether it benefits them financially, their health, or the environment.

Q3: For which category (environmental or health/safety) is the information most prevalent?

Overall, the increased amount of environmental information compared to that of health and safety information is most likely due to the time period, in which there was the birth of the environmental movement and reaction to an energy crises. Additionally, environmental concerns continue to grow with current energy dependency concerns and a move toward sustainability within the professional design world. Again the concern is to provide consumers with innovative information sooner rather than later. This will ensure informed decision making in the market place and drive consumer demand for more sustainable products. With the increase in the Green Design initiative, however, it is important to include information related to consumer health and safety, which is severely lacking (as shown by the results of this content analysis). After all, innovative products will do no good if they will eventually pose a threat to the user's well-being.

Q4: What is the quality of the information, as determined by advertisement or article?

As stated in the results, the quality of information could not be determined as good or bad based on whether it was presented in an advertisement or article. In the opinion of the researcher, the informational quality was poor and failed to significantly educate the consumer. This is partially due to the fact that *House and Garden* is not just a home magazine, so much of the information found was not related directly to interior home products, and rather, it was associated by general concepts, usually dealing with environmental concerns. Additionally, the information provided, especially within the advertisements, seemed only to appeal to the environmental or health/safety sense of the

consumer and not necessarily to educate the consumer on these important issues. For example, certain advertisements for appliances denoted that they were Energy Star certified. However, no attempt was made to explain to the consumer what exactly Energy Star is and why it makes the appliances environmentally responsible. Information, as in the Energy Star example, seems only to be placed in advertisements because it will help sell that product, not because there is any actual environmental concern by the producer of the product. Therefore, advertisements are biased and generally not a good source for consumers to gain reliable information. The content and subject matter of articles could also be said to contain biases. The editors could only be including information that will help sell the magazine, instead of having a genuine concern for their readers and educating them through their media outlet.

CHAPTER 7: SUMMARY, FURTHER RESEARCH, AND CONCLUSION

Summary

As the data showed, there was a relatively small and disappointing amount of information available through *House and Garden Magazine* in which consumers could be educated on Green design and health and safety issues in their home. Though the data did show promise in the growth in quantity of environmental information, there is still a long way to go to achieve well informed consumers. There also was no indication that the amount of health/safety information was on the rise.

This research indicates that there was a demand for innovative products only to fix current problems during a time of heightened need (i.e., new energy sources during the energy crises). This is instead of *House and Garden Magazine* attempting to raise consumer awareness of new products that are beneficial regardless of crises, but could also lessen the effects of future dilemmas. By analyzing the past, as this research does, adjustments can be made to avoid repeating old mistakes.

Further Research

As this research was performed, some questions arose which could be areas of further investigation. For example, what role does the current editor in chief and his/her personal agenda have in regards to the types of information provided in a magazine? Does consumer interest drive the content of a publication, or does the content drive consumer interest? Further development of this topic could also be pursued by analyzing other home magazines that may have different agendas and different consumer demographics. Analyzing other publications within the same time period to verify if information is being provided industry wide or in only one specific publication could be a

valuable source of information to supplement further research. Further development could also analyze consumer publications versus trade publications, and publications for commercial design. This comparison would show differences, if any, between the types of information that professionals are receiving relative to that of a traditional consumer. Commercial publications could also evaluate the impact of public building regulations and the implementation of innovative interiors products, and how that relates to the timing in which they are seen in residential applications.

Conclusion

When revisiting *House and Garden Magazine's* current adage, "The Well-Lived Life," and comparing it to the results of this study, it becomes apparent that its meaning lays only in aesthetics. This becomes apparent in the lack of information provided in *House and Garden* about functional concerns in the home, such as user health/safety and environmental responsibility. In other words, *House and Garden* is implying that if it looks good then it is good. This could be considered an interior decorator's approach, i.e. an individual who has no formal training but has a knack for home decorating (Merchandise Mart, 2006, Working with a Design Professional, para.1). An interior designer, on the other hand, must have a formal education, practical experience, and be licensed to validate these accomplishments. As a result, a designer would not only take into account the aesthetics, but would account for the needs of the space and the individuals who use the space. By incorporating the aesthetics and the function, the space will be designed, rather than just decorated or disguised. The lack of sufficient information found in *House and Garden Magazine* could also be viewed as irresponsible on the part of the magazine. The magazine editors may disagree that they are responsible

if they put up the statement that their magazine's content is simply home fashion, not interior issues. Then, however, it would be argued that if it is simply fashion, it is not interior design. For in today's world with its many complicated issues, home fashion is simply not good enough. All aspects from function to aesthetics must be considered when interior design is being discussed. In fact great career opportunities lie ahead for interior designers who are up to date on the most current research and who could produce a magazine that displays fashionable interiors with quality functional design. Such a media could be in a niche that bridges news magazines and home fashion magazines.

This issue of *House and Garden Magazine* taking responsibility holds especially true for the growing health concerns as they relate to housing brought forward by Krieger and Higgins (2002). Again, it is probably the case that *House and Garden* does not feel socially responsible. Many of the health concerns reported in Krieger and Higgins' research were prevalent in substandard housing. Looking back to the demographics of their readers, they simply do not reside in substandard housing with a mean household income over $110,000, and therefore *House and Garden Magazine* may feel that their readers will not be interested in these issues that do not affect them. On the contrary, Granzin and Olsen (2001) found that homeowners with a higher education and income demographics were most likely to partake in recycling and other environmentally responsible activities. This suggests that they would hold the function of their home in the same high regard as the aesthetics. If *House and Garden Magazine* gears their magazine towards a whole design concept partaking in some social responsibility, rather than decoration and apathy, then their readers would benefit from an increase in functional information for the space in which they live. If nothing else, this increased

information could keep their readers in their home and healthy much longer, ultimately prolonging their magazine subscription.

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APPENDIX A: Sample Record Sheet and Key to Coding

0	1	2	3	4	5	6	7	8	9
Issue ID (mmyy)	Article in T.O.C. (y/n)	Ad Env. (#)	Ad Health (#)	Ad # pgs Env. (#)	Ad # pgs Health (#)	Article Env. (#)	Article Health (#)	Article # pgs Env. (#)	Article # pgs Health (#)

House and Garden Content Code Sheet

Variable	Description	Code
0. Issue ID	Month and year of issue	mmyy
1. Article in T.O.C	Relevant article in the table of contents	Y=Yes N=No
2. Ad Eco.	Number of ads that contain an eco keyword	Exact number
3. Ad Health	Number of ads that contain a health keyword	Exact number
4. Ad # pgs Eco	Number of pages in an eco ad	Exact number
5. Ad # pgs Health	Number of pages in an eco ad	Exact number
6. Article Eco	Number of articles that contain an eco keyword	Exact number
7. Article Health	Number of articles that contain a health keyword	Exact number
8. Article # pgs Eco	Number of pages in an eco article	Exact number
9. Article # pgs Health	Number of pages in a health article	Exact number

APPENDIX B: Table of Found Information
in Product Categories By Issue Year

Table of Found Information in Product Categories By Issue Year

Year	Product Environment	Product Health	Year	Product Environment	Product Health
1955	insulation windows	windows	1980	ceiling fans windows solar home	
1956	windows	mattress dishwasher detergent glass shower door heating	1981	heating greenhouse/solar energy energy efficient homes ceiling fans solar home	
1957	windows tree preservation	carpet	1982	heating window coverings insulation green house/solar energy	
1958	windows	air-conditioner	1983	greenhouse/solar energy	
1959	cars insulation heating	wood floors dishwasher detergent heating fuel	1984	solar home cars greenhouse/ solar energy energy efficient homes	
1960	central air tree preservation		1985		
1961		air-conditioner mattress air filter carpet draperies	1986	cars	air filter
1962		air-conditioner heating fuel air filter central air	1987		
1963	windows	dishwasher heating central air glass shower door	1988	cars	food
1964	windows	air filter dishwasher glass shower door	1989	windows	
1965		draperies bedspread glass shower door	1990	pesticides windows window coverings	
1966		air filter	1991		
1967	windows		1992	toilet lawn mowing environmental program donations with purchase	
1968			1993	reuse/recycle water consumption dishwasher	
1969		humidifier	1994		
1970			1995		
1971	central air siding	central air disinfectant spray water filter	1996		
1972	anti-polution/environmentlaism central air	central air	1997	windows	
1973		disinfectant spray mattress	1998	range	
1974	windows		1999	windows	toilet comforter
1975	solar home energy savings/alternate energy	mattress family comfort/health -bed -breakfast -exercise	2000		
1976	air-conditioner windows energy savings/ efficiency	mattress	2001	washer/dryer-energy star light bulbs	
1977	cars washer/dryer dishwasher range windows air-conditioner awnings/window coverings		2002	yard sprinklers forest conservation energy conservation-federal requirements solar panels water conservation washer/dryer-energy star windows cars lighting "building green"-energy savings, eco-friendly systems	windows
1978	solar home dishwasher insulation cars		2003	tree preservation	allergens
1979	refrigerator dishwasher		2004	organic living environmentally friendly gardening	
			2005	global warming flooring	vacuum cleaner